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ABSTRACT

Directions are given for making simple sports and play equipment for handicapped children. (JD)

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ADAPTING EQUIPMENT FOR THE HANDICAPPED

By Dr. Larry J. Ankenbrand

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It's nice to see all these smiling faces at 9:00 in the morning.

Always remember to start everything you do on a positive point and not a negative one. The same is true here as you should stress the ability and not the disability. Think of the best!

I'm a fundamentalist at heart or an elementary person in that I stress the basic principles. Make it simple even if you have to be a simpleton yourself. The key is to make it FUN. To do this you must be enthusiastic and creative in your teaching.

There's a motto I have on my desk that helps me. The author is unknown but it goes like this: "Every person is my superior in that I may learn from them!"

With that in mind let's look at someone and laugh.--Now laugh out loud!--Super!--Laughing like smiling is contageous, so remember to keep it up in your teaching.

Do the best you can even if it doesn't please everyone.

Just the (so called) normal student meets enough frustrations when not handicapped. They meet frustrations not only at home but in school too. They have to accept criticism and compete with all the other handicapped and non-handicapped students. This is where PL 94-142 comes into view. It's just like the little boy who came home from school one day and his mother asked him what happened today. He said, "Larry did a summersault." "What did you do honey?" she said. "Ann did a cartwheel" "That's nice but what did you do honey?" she said. The little boy said, "I cried!"

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Than's a good example of being in the wrong setting. He wasn't ready to be mainstreamed or in other words he was not in the least restrictive environment.

Be specific in the instructions or directions so you don't confuse the students. Like the story of a man walking by a mental institution with a sack on his back. A patient looking out the window saw him and said, "What you got there?" He said, "Fertilizer." "What's it for?" he asked. The man said, "to put on my strawberries." The patient said, "Oh, I put cream on mine, but I'm crazy"---So you see, we really need to be specific.

Most activities, games, sports, were designed for non-handicapped persons, but modifications in just about all of them may be made so the handicapped can enjoy them. However, when making the change or adapting the activities, it is wise to make them as close to the actual activity as possible. The less change, the more the handicapped will feel like the others. It will also cut down on their resistance. Remember that the adaptation should be made to suite the physical ability instead of the disability. Never forget to ask the person that is handicapped for input.

Some general suggestions are:

Walk or wheel for run
Bounce or roll for run
Sit, kneel, or lying down for standing
Larger and/or lighter balls
Change rules, more hits, volleys, etc.
Have lighter equipment
Decrease distance
Decrease or increase number of players
Reduce size of area or field
Make your own equipment
Others - as you will see from the outline which you have.

I will now give you a few ways of modifying equipment and activities.

You are the first piece of equipment that can be changed. No cost. Just have to think a little and experiment. It's amazing what just "you" can do.

Sock doll - Make a sock doll or buy a stuffed or rag doll. The one I have has a happy face on one side and a sad face on the other. I use it for feelings, expressions, to show students how to do things, how to get into different shapes, and I toss it up and have them get into the shape of the doll.

Shock cord - This is nothing more than a stretch rope. It is excellent for teaching jumping because it gives if they fall on it and they won't trip. Students can go over, under, with the face up, feet first, as well as many other movement ideas. Oh, have you heard the one about the rope? Skip it!

Newspaper ball - Just wad up a piece of newspaper and put some masking tape around it. Make different sizes of balls. They are easy to make, inexpensive, safe, and easy to catch.

Cage ball - Get a heavy duty garbage bag and fill it with crumpled newspaper. A gunney sack can also be used.

Newspapers can be used to pick up, toss and catch, freeze when it lands, move around it, move at different levels, at different speeds, one body part on the paper and reach away with a different body part, and ways to jump over.

Carpet squares can be used the same as the newspapers. They can be used as a base, a specified space for each student or to have a wheel on. They can slide on them with different body parts, or the elementary rug routine can be done to music in a rowing effect.

Newspaper stacks - Jump on and off, over, can tumble over them, use for an obstacle course, or a bridge support.

Appliance boxes - They can be used for just about any creative thing your mind can come up with such as a house, school, boat, car, train, a shape box, obstacle course, time out box, or a basket for wheelchair shooters.

Hoop activities - Use the simple roll to develop the arms and shoulders. They can crawl in and out, head in-feet out, or different ways to go through.

Bean bags - Make them out of scraps. They are excellent for throwing, catching, tossing, partner work, and movement exploration ideas such as, what can you do with it or with what different body parts.

Hopscotch - Maybe just jump, walk or wheel to or on the number for the math concepts. If possible use right foot, left foot, both beet, sideways, and backwards.

Foot and hand prints - Have them color coded, right and left, can be done on commands, have some big and some small, and have numbers and/or letters on them too!

Nylon balls - Take an old nylon stocking and turn it back over itself to form a ball. Good for beginning ball skills and it can also be used with scoops, nylon paddles, or racquets.

Nylon sock and ball - Tie a nylon sock to the ceiling or some support with a ball in it. This is excellent for beginning batting skills and for tracking. Lie students on their back and watch the eyes to see if they are tracking properly.

Table Tennis Balls - Let them see the difference in size and weight. Used in the pool to blow in the water or to roll on the floor.

Balloons - They are an important part of any adapted physical education program. You can blow them up, get in their shapes, and they fall slowly, go a short distance when hit, are low cost for catching and kicking, (eye-hand and eye-foot), for volleyball, badminton, and obstacle courses.

Coat hanger and nylon - Make a diamond or circular shape out of the hanger and slide the nylon over the hanger. You now have a nylon bat, racquet, or paddle which can be used for light balls and balloons.

Intertubes are excellent for water activities, to bounce on, hop, jump or crawl in and out, or for a target, or musical tubes.

Milk Cartons can be used for targets, bridges, ball holders, for balancing, obstacle course, and bowling.

Nerf balls - easy and safe to catch as well as coming in different sizes and colors. There are many different kinds of nerf toys and objects that can be used too.

Romper stompers - Make them out of juice or coffee cans and a piece of rope. This is excellent for balance and coordination and is a good lead up to stilts. Teaches them to move in different directions at a different level.

Whiffle balls - These balls are light weight and the ones with the holes make them easier to catch. Excellent to use them with a plastic bat, hockey sticks, or plastic croquet mallots. They are super to tie a string to them which makes them easy to retrieve.

Tennis balls - This is another size ball to use in throwing and catching. The balls can be numbered and placed in the same corresponding number of a small milk carton which helps in easy storage.

Sponge balls - These are similar to the nerf ball but give the students a little different texture. They are soft, light and safe. A simple sponge can be used for throwing and catching skills too.

Bike intertubes - Tubes can be used as a type of hoop, base or one's own space. They are good pulling with a partner or can be hooked under the feet and pulled up with the arms.

Barrel ball is a circular container that has been used for basketball and accuracy shooting when one is in a wheelchair. Pictures and designs may be painted on the barrel. Just cut a hole in the side of the barrel for the ball to roll out. In the bottom of the barrel put an inclined board so the ball will always roll out of the bottom hole.

Plastic milk bottles can be used for hit or kick the bottle, for soccer, bowling, obstacle courses, for floaters in the swimming pool, and to be used for boundary markers.

Floor hockey can be a lot of fun if a larger puck or ball is used depending upon what surface the activity is played upon.

Milk carton bowling or tape containers is an exciting activity for students that are handicapped.

Parachute activities are a must with the handicapped. Simple modifications need to be made regardless of the disability. It is usually more fun if a few aides are there to help hold the chute.

Trampoline - The trampoline is good as a behavior reinforcer and helps in body coordination for the deaf, blind, and physically handicapped.

Singing of simple songs and games are a social motivator as well as helping make the smiles and laughter more contagious.

Brooms can be used to push or hit balls and objects. They can also be used as wands or for lifting exercises.

Indoor croquet mallots can be made out of quart bleech bottles and wooden dowls. The wickets can be made out of coat hangers and 2 x 4 scraps. Any plastic ball will work as long as it is not too large.

Ball to wheelchair - This is an excellent device which makes the students more independent. All that has to be done is tie a piece of string to a ball and to the wheelchair.

Ball tied to a bat is similar to the ball tied to the wheelchair. One end of the string is tied to the ball and the other is tied to a bat, crutch, arm, or leg.

T-Ball - A batting-T helps the students master success in batting and is a good lead-up activity to softball.

Indoor shuffleboard is good for the handicapped because it is of plastic which makes it lighter. Smaller units can be played on table tops.

Horseshoes need no modification if the rubber or plastic ones are used.

Quoits is another activity that is exciting and needs no modification.

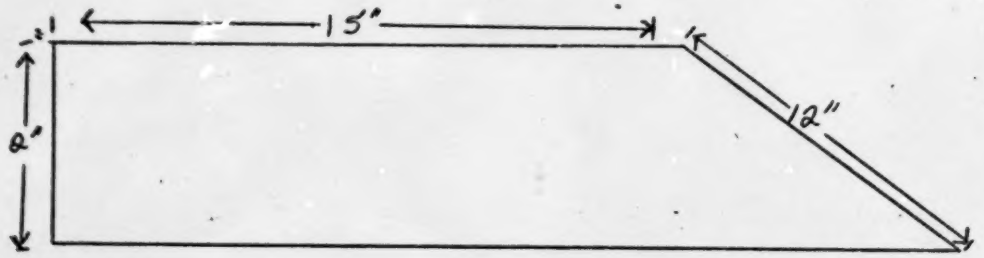
Balance boards can be made out of a 2 x 6 board that is laid on the floor. After that is mastered, use a 2 x 4 board on the floor. As balance increases the boards may be raised with wooden blocks.

Circuit training is an excellent challenge and a change of pace in doing exercises. Circuit training is good for warm-up and cards with pictures and numbers can be made for each station. Color coding may be used too.

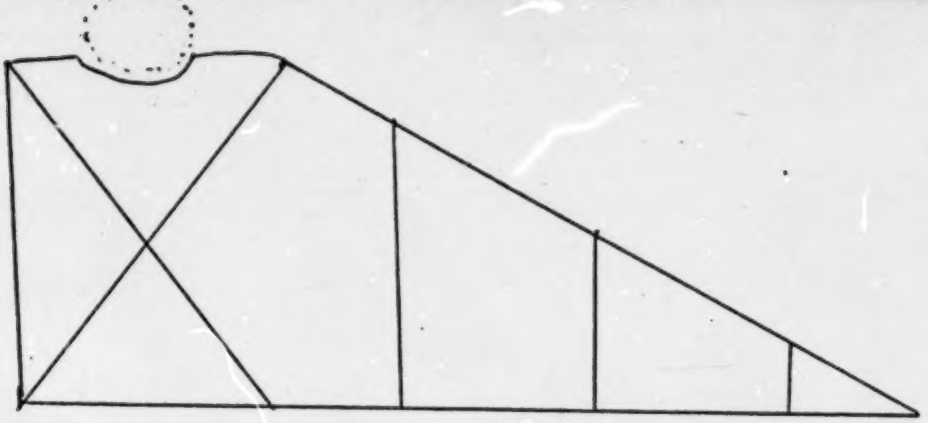
Scooters are good for the arms and legs and are good motivators. Fun can be had by all in relays, games, and activities.

Bowler's guide rail is used for the visually handicapped students. It gives them the direction in which to roll the ball.

Bowling wheelchair ramp - This particular ramp is used to tilt the wheelchair to one side. It helps the bowler from the wheelchair to have a smoother, backswing and release of the ball without hitting the rear wheel. The ramp is one foot wide, two inches high, fifteen inches long with an incline of twelve inches.



Bowling ramp - The idea for the bowling ramp was modified from Mr. Virgil Napiecek of Maryville, Missouri.



It is made out of 1/8-inch steel rods but you can now buy a lighter model which can be taken apart for easy storage. This would be used for someone who is severely physically handicapped. All they do is have an aide or buddy place the ball on the ramp, then all they have to do is push or shove the ball until it rolls down the ramp to the pins.

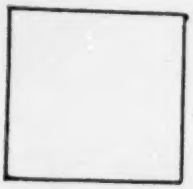
Bowling cue - (Please see article and diagrams.) The bowling cue can easily be made and mastered in a short period of time. If you want the ball to hook to the left, you tilt the cue to the left. If you want a right hook, you tilt the cue to the right. It is excellent for students with very little strength or one that has short or deformed arms. There is no approach as the chair is stationed behind the foul line.

Bowling Board - (Please see article and diagrams.) The board is easily attached to the wheelchair foot rests. It was invented to be used with electric wheelchairs but much success has been accomplished from manual chairs too! The ball is placed down in front of the board and the person in the chair gradually wheels their chair forward to the foul line where the ball leaves the board and rolls toward the pins. A ball without any finger or thumb holes will work better as it makes a smoother and straighter roll.

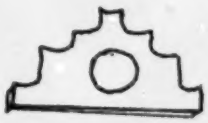
Bowling ball handles can be ordered from catalogs. The retractable handle has been used effectively by some students. Sometimes the ball will get caught in the ball return and cause damage to the bowling equipment.

Billiards bridge - The billiards bridge was also invented by the author for use with the physically handicapped. All you need is two pieces of boards one inch thick and four inches square. By using the bridge, the person does not have to remove it after each shot which is difficult for the CP, MD, and severely handicapped. The hole in the center is where they put the cue when they move it into shooting position. When ready to shoot, they place the cue on the appropriate height groove to make their shot.

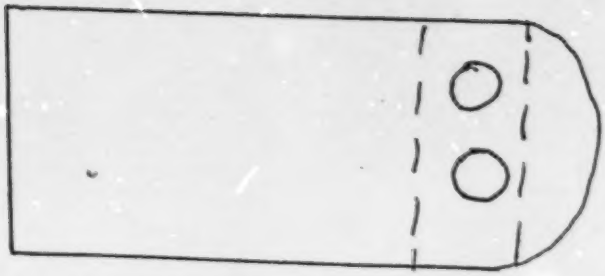
Top View of Base



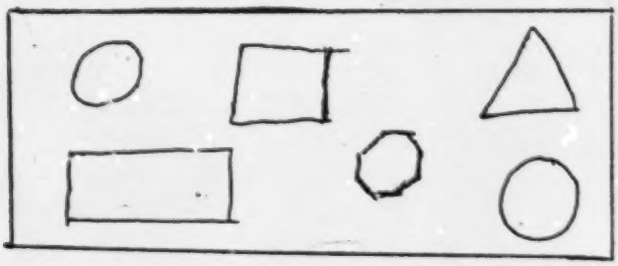
Front View of Top Plate



Kickboard for C.P. - All you have to do is take a kickboard and drill two holes in it or cut them out as shown in the diagram. Place a piece of marine plywood under the holes and insert two, one-inch dowls, four inches long into the holes and glue to the plywood. Cut another piece of marine plywood and cut out holes so it will slide down over the dowls to the kickboard. Glue this and you have a kickboard that the cerebral palsy can clutch to better than simply the side of the board.



Shape board is good for teaching the shapes as well as throwing for accuracy. A shape board is nothing more than a piece of plywood with different shapes cut out of it such as a square, triangle, circle, rectangle, etc. I like to have different colors painted around each of the shapes. See diagram.



A crutch for a bat has been used successfully when playing softball and other ball games for the person on crutches.

Table games of all kinds are good for the bed-ridden and wheelchair people. If they can do some type of more strenuous activity, please make sure they participate.

Card games are good for the same group such as checkers, chess, dominoes, and others. These games may be ordered from The American Federation for the Blind in New York if the students are visually impaired.

Balloon Badminton - This game is played with a lowered net and balloons instead of shuttle cocks. A paddle may be used instead of a racquet.

Fencing - Make a foil out of a ½-inch dowl, a piece of aluminum etching and some tape to hold it together. Safe and fun.

Scoop ball - The scoops are made out of plastic bleech or milk bottles. Pitching and catching help the tracking for the mentally handicapped.

Shuffleboard - Shorten the distance and use plastic or lighter equipment. You should use tape to show the direction for the visually impaired. Use of different textured discs will help them too.

Basketball can be modified by lowering the baskets and using a junior basketball or lighter rubber or foam balls.

Softball - Modifications depend upon each individual. You may use a batting T or they may use their fist or hand. If it is a wheelchair game, you can have the batter out if the fielder touches the ball before the hitter reaches a base.

Ball return - A ball return is nothing more than a large net hooked to the backboard under the basket and tapered back to the person in the wheelchair. A person with two or three balls can do a lot of shooting in a short period of time.

Hands are used for manual communication.

Hands and voice are used for total communication.

These are just a few of the ways I have modified equipment and games for the handicapped. Some of the approaches are not new, but for the beginning teacher it is a starting point for their own creativity and inventions.

If any one has any questions or needs further information, they may contact me by writing to: Dr. Larry J. Ankenbrand, McAfee Gym, Eastern Illinois University, Charleston, Illinois 61920.